

DLA200

Dual, modular, 'hot-swappable' Line Amplifier with optional 1+1 redundancy for IF (70/ 140MHz), L-band & SHF signals



Available line amplifier modules for the DLA200 chassis;

MLA70	IF 70±20MHz & 140±40MHz frequencies
MLAU240	UHF 240-323MHz frequencies
MLAL1450	L-Band 950-1450MHz frequencies
MLAL1750	L-Band 950-1750MHz frequencies
MLAL2150	L-Band 950-2150MHz frequencies
MLAL2450	Extended L-Band 950-2450MHz frequencies
MLAS2400	S-Band 2.0-2.4GHz frequencies
MLAC4200	C-Band 3.4-4.2GHz receive frequencies
MLAC6725	C-Band 5.85-6.725GHz transmit frequencies
MLAKu1275	Ku-Band 10.7-12.75GHz receive frequencies
MLAKu1450	Ku-Band 13.75-14.5GHz transmit frequencies
MLAKu1450B	Ku-Band 12.75-14.5GHz transmit frequencies
MLAKu1480	Ku-Band 13.75-14.8GHz transmit frequencies
MLAD1840	DBS-Band 17.3-18.4GHz transmit frequencies

For other 'non-standard' frequency requirements, please contact the factory.
For equivalent remote mountable units, please see PLA series datasheet.

The 19-inch 1U rack mounted **DLA200** chassis unit is designed to accept two, line amplifier modules. Modules can be inserted/ replaced in the **DLA200** unit from the rear without the need to remove power or disturb the other channel in any way.

The **DLA200** chassis units are mains powered (redundant power supplies as standard) and are constructed of high-grade components to give the ultimate gain flatness and stability performance.

The **DLA200** unit is available with optional integral 1+1 redundancy switching and control for use when two identical modules are used.

Peak Features

-  High gain flatness and stability performance
-  Amplifier low current alarm monitoring
-  Slope compensation options
-  Redundant power supplies with dual mains input
-  Integral 1+1 redundancy option for module switching



DLA200 Chassis - Typical Specification

Mechanical

Width	19" standard rack mountable
Height	1U (1.75")
Depth	400mm (15.7"), plus connectors
Construction	Aluminium chassis
Weight	4.5kgs (10lbs)

Environmental

Operating temp	0°C to +50°C
EMC	EN 55022, part B & EN 50082-1
Safety	EN 60950

Power Supply (2off in redundant configuration)

Voltage	90-264VAC
Option 11;	48VDC
Frequency	47-63Hz
Total power	50 Watts max.

Control System Interface

Local interface	Front panel key switches (for option 6)
Remote control	RS232/ RS485 port
Option 9;	Ethernet; embedded web server & SNMP network management support
Alarms	PSU fail Amplifier current detection

Integral 1+1 'Module' Redundancy (Option 6)

Connections	SMA (f), 50Ω
Switching speed	<150ms (from fault to switch completion)
Switch isolation	>60dB input to output
Cables	Includes high grade rear panel links

Note: The connection to the internal redundancy circuitry is made via SMA (f) RF links on the rear panel, this allows for by-pass wiring should the need arise. High grade coaxial linking cables are provided.

10MHz Reference Pass-through (Option 5)

Allows 10MHz reference fed into the unit (multiplexed onto input connection) to 'pass-through' to output (L-Band only).	
Option 5a;	for use with option 6, fitted between system input and output connections
Option 5b;	for use without option 6, fitted between module input and output connections

L-Band Linear Slope Compensation (Option 15a)

Compensates for internal circuitry & external primarily across-site cables
Notes: Only applicable with option 6, fitted to main chassis common signal path. Unit options chosen will determine 'surplus' available for external compensation (for details contact factory).

Frequency	950-2150MHz
Compensation	Passive, fixed 5dB nom., positive slope

Integral Input Combiner /Output Splitter (Option 16a /b)

Option 16a;	2-way
Option 16b;	4-way
Connections	SMA (f), 50Ω

Notes: Only applicable with option 6, fitted to main chassis common signal path. Typical 7dB insertion loss can be expected. Includes connection spanner.

DLA Options

- 5a) 10MHz reference pass-through (with option 6)
- 6) Integral 1+1 redundancy module switching
- 9) Ethernet interface with embedded web server & SNMP, replaces RS232/485 port
- 11) 48VDC prime power supply
- 15a) 5dB passive, fixed, slope compensation (L-Band only)
- 16a) Passive system input combiner or system output splitter, 2-way
- 16b) Passive system input combiner or system output splitter, 4-way

Note: The addition of options can modify the typical specification, for details please consult the factory.

MLA Modules - Typical Specification

Input

MLA70;	50-200MHz
MLAU240;	240-323MHz
MLAL1450;	950-1450MHz
MLAL1750;	950-1750MHz
MLAL2150;	950-2150MHz
MLAL2450;	950-2450MHz
MLAS2400;	2.0-2.4GHz
MLAC4200;	3.4-4.2GHz
MLAC6725;	5.85-6.725GHz
MLAKu1275;	10.7-12.75GHz
MLAKu1450;	13.75-14.5GHz
MLAKu1450B;	12.75-14.5GHz
MLAKu1480;	13.75-14.8GHz
MLAD1840;	17.3-18.4GHz
Connector	SMA (f), 50Ω
Option 1a;	N-Type (f), 50Ω
Option 1c;	BNC (f), 50Ω (<2150MHz only)
Option 1e;	BNC (f), 75Ω (<2150MHz only)
Option 1g;	F-Type (f), 75Ω (<2150MHz only)

Notes: Some connector options may lower the overall unit performance. F-Type performance cannot be guaranteed.

Return loss 16dB

Output

Connector	SMA (f), 50Ω
Option 1b;	N-Type (f), 50Ω
Option 1d;	BNC (f), 50Ω (<2150MHz only)
Option 1f;	BNC (f), 75Ω (<2150MHz only)
Option 1h;	F-Type (f), 75Ω (<2150MHz only)

Notes: Some connector options may lower the overall unit performance. F-Type performance cannot be guaranteed.

Return loss 18 to 22dB (frequency dependent)

RF Performance

Gain	20dB min
Option 4a;	30dB nom
Option 4b;	40dB nom

Note: For other gain requirements please contact the factory.

Gain flatness	±0.25dB (bandwidths <500MHz) ±0.5dB (bandwidths <800MHz) ±1dB (bandwidths <1200MHz)
Active directivity	22dB typ., 20dB min
RF Input power	-10dBm max (no load, no damage)
TOIP	+25dBm (+20dBm >2150MHz)
1dB output GCP	+13dBm (+8dBm >2150MHz)
Note: For higher GCP options please contact the factory.	
Noise figure	7 to 9dB (frequency dependent)
S-Band	<1.7dB (degrades input return loss to 12dB)

Note: For improved S-Band RL configurations (with higher NF), please contact factory.

Monitor Ports (Option 2)

Option 2a;	Input monitor
Option 2b;	Output monitor
Connector	SMA (f), 50Ω, on rear panel
Level	-20dBc ±3dB

L-Band Linear Slope Compensation (Option 15)

Compensates for internal circuitry & external primarily across-site cables
Note: Unit options chosen will determine 'surplus' available for external compensation (for details contact factory).

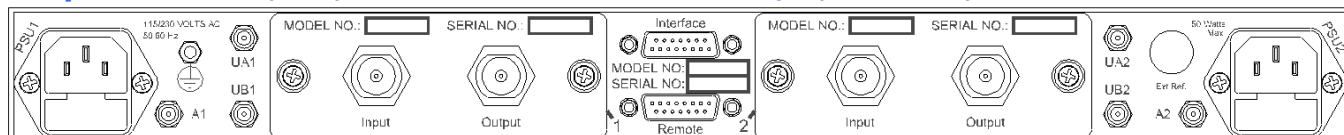
Frequency	950-2150MHz
Compensation	Passive, fixed 5dB nom., positive slope

MLA Options

- 1a) N-Type (f), 50Ω MLA module input connector
- 1b) N-Type (f), 50Ω MLA module output connector
- 1c) BNC (f), 50Ω MLA module input connector
- 1d) BNC (f), 50Ω MLA module output connector
- 1e) BNC (f), 75Ω MLA module input connector
- 1f) BNC (f), 75Ω MLA module output connector
- 1g) F-Type (f), 75Ω MLA module input connector
- 1h) F-Type (f), 75Ω MLA module output connector
- 2a) -20dBc input monitor on rear panel
- 2b) -20dBc output monitor on rear panel
- 4a) higher gain to 30dB nom
- 4b) higher gain to 40dB nom
- 5b) 10MHz reference pass-through
- 15) 5dB passive, fixed, slope compensation (L-Band only)

Note: The addition of options can modify the typical specification, for details please consult the factory.

Rear panel view (sample, shown with 1+1 redundancy option fitted)



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